

CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: Westmoreland Resources, Inc

Project: Tract III South Extension

OPERATING PERMIT #: 85005

LOCATION: Absaloka Coal Mine

County: Big Horn County

PROPERTY OWNERSHIP: ☒ Federal ☐ State ☒ Private

TYPE AND PURPOSE OF ACTION:

Westmoreland Resources, Inc. (WRI) proposes to expand the Absaloka Mine to include an additional 1,713 acres of Tract III South. The current mine plan is expected to be depleted of recoverable coal by early 2008. The Tract III South reserve is the only remaining mineable Rosebud-McKay coal within the Tract III Crow Indian coal lease. This additional area is estimated to contain 24 million tons of recoverable coal.

Development of the initial cut will utilize a box cut at the eastern boundary of Section 31 (T1N, R38E) adjacent to mined lands in Section 36 (T1N, R38E). Box cut spoil will be placed in Section 36 and a haul road will be constructed at the toe of the spoil. This process will cause disturbance to some reclamation; however, it appears to limit the extent of re-disturbance. Additionally this haul road orientation will reduce the overall cost of production.

Progressing from the box cut, mining is planned to extend south nearly to the Tract III boundary and east toward Middle Fork Sarpy Creek – East Fork Sarpy Creek divide. The mine plan will progress until overburden depth exceeds 150 feet. The first few cuts will be small and therefore are dependent on the remaining cuts of permit # 85005 to fulfill coal contracts. These cuts would run concurrently to fill the contracts.

Reclamation Plan:

N = Not present or No Impact will occur.

Y = Impacts may occur (explain under Potential Impacts).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	<p>[Y] Soils within the mine passes are stable, non-erosive, and were previously disturbed for cultivation. Representative soil samples were tested for suitability parameters of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), organic matter (OM), saturation percentage, and texture during the soil survey. Historically the soils of the Absaloka Mine area meet suitability criteria for reclamation.</p> <p>The soil resource will be salvaged in two lifts. The first lift of soil material ("A" lift), containing A and some B soils, includes the material up to 12-inches in depth; however, typically the first lift will consist of the top six inches of the soil resource. The second lift of soil material ("B" lift), containing B and C soils, may include material down to approximately 48 inches. The "A" and "B" lift soils will be distributed on regraded spoils where the postmining topography (PMT) has been met. If there are not regraded spoils available, "A" and "B" lift soil will be stockpiled separately in designated stockpile areas. Each stockpile will be marked with a sign identifying the soil type, and soil stockpiles will be</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	<p>protected from wind and water erosion.</p> <p>WRI will regrade spoils to the approved PMT following mining. The regraded spoils will be tested for suitability parameters of pH, EC, SAR, OM, saturation percentage, and texture prior to soil laydown. The test results will be submitted to the Department for verification. Once the PMT is achieved and the spoils are determined suitable, the "B" lift soil followed by the "A" lift soil will be redistributed. The total depth of redistributed soil is generally 24 inches. In order to achieve desirable substrates to diversify vegetation, soil depths will deviate from the normal 24 inches as described in Exhibits B-1 <u>Mining and Reclamation Methods</u> and B-26 <u>Soil Balance Plan</u> of WRI's SMP #85005. Following redistribution, an appropriate seed mix will be applied during the next best available planting period. Reclamation determined not to achieve goals set out in the reclamation plan will be evaluated and a treatment will be implemented.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>[Y] <u>Ground Water:</u> An additional 305 acres would be mined at the Absaloka Mine if the proposed Tract III South mine plan is approved, resulting in the removal of 305 acres of the Rosebud-McKay coal aquifer south of the existing mine area. The coal aquifer would be replaced by a backfill (spoil) aquifer. A groundwater model of the disturbance area (Nicklin, 2004) predicts drawdown would increase approximately one-and-a-half miles, with a localized drawdown of 60 feet centered over the proposed amendment area. Water level recovery in the backfill aquifer is projected to take decades. Approximately 50 years after completion of mining, the spoil aquifer is predicted to approximate the pre-mine flow direction and water levels are expected to remain 10 and 20 feet lower than pre-mine levels. Approval of the amendment would increase the area (and volume) of the backfill (spoil) aquifer, which would increase the extent and, possibly, duration of diminished water quality in the area. Typically, increase in total dissolved solids of the backfill aquifer is two to two-and-a-half times greater than that of the undisturbed coal aquifer, usually with substantial increases in sulfate and sodium. Mining is not expected to interrupt the supply or affect the water quality of any private well nor affect water quantity or quality in Sarpy Creek.</p> <p><u>Surface Water:</u> Middle Fork Sarpy Creek (MFSC) is an ephemeral stream located south of the proposed mine area and would not be physically disturbed by mining. However, mining would disturb part of the MFSC drainage basin and interrupt normal flow to the drainage. Sediment ponds would contain sediment and runoff from disturbed parts of the drainage basin. Discharges from the ponds would be required to meet effluent limitations as listed in the mine's MPDES permit. Significant impacts to offsite surface water quality due to runoff from disturbed areas are not expected. Any decrease in the amount of runoff and peak discharge to the MFSC should be minimal after reclamation is complete and the ponds are removed. A study of MFSC has determined that it is not an alluvial valley floor.</p> <p>Under the proposed plan, the acreage of the post-mine MFSC watershed would be increased over that of the currently approved</p>

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	<p>reclamation plan, but would still lose 184 acres of a total of about 8,160 pre-mine acres. Overall, drainage density would be increased over that in the currently approved reclamation plan, more nearly matching the pre-mine density. There should not be a measurable change in flow to the MFSC over that observed prior to mining.</p> <p>Springs and seeps in the permit and amendment areas occur primarily in drainage bottoms and flow for only short distances when they flow at all. One spring, SP 25, would be removed by mining. SP 25 has very low production, is more appropriately termed a seep, and is not in use as a developed water source. Its removal is not expected to impact land uses.</p>
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] Baseline air quality studies are contained in Absaloka permit exhibits F-1 and F-2. Exhibits B-28 and B-29 contain the Air Quality Protection Plan and the Air Quality Monitoring Program respectively. Air quality monitoring has been conducted since 1975. Various methods have been used to evaluate a suite of air quality parameters. Monitoring demonstrated that the mine operation has met or exceeded particulate levels consistently enough to reduce the monitoring program. State air quality permit # 1418-03 currently governs air monitoring requirements at the Absaloka mine.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[Y] A baseline vegetation inventory of the area was conducted by WESTECH Environmental Services, as reported in "Baseline Vegetation Inventory Tract III South, Absaloka Mine, Montana," Ken Scow, June 2004. Quantitative sampling was conducted in or near all areas potentially affected by the proposed mine. Other, non-affected portions of the study area received the same detail of vegetation mapping ("two-dominant species") as did the potentially affected areas, but were not quantitatively sampled. No rare cover or community types were encountered in the survey. However, one State ranked "S1" species <i>Carex grvida</i> , (at high risk because of extremely limited and potentially declining population numbers and/or habitat, making it highly vulnerable to extirpation in the State) was recorded on 3 of 15 plots (Scow 2004). Mining will remove existing vegetative communities and may affect <i>Carex grvida</i> . However, reclamation plans are designed to incorporate soil substrates, landscape and topographic diversity as mitigation measures. Vegetative resources will be affected for the short term; however, reclamation measures incorporated into the permits are designed for long term mitigation.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[Y] Wildlife surveys have been conducted each year since 2003 by WESTECH Environmental Services, as reported in "Wildlife Monitoring Absaloka Mine Area, March 2005." Wildlife studies associated with the mine have been conducted since 1985. Mining will affect existing terrestrial, avian and to a limited extent aquatic life and habitats; however, these resources are expected to reestablish following reclamation. Reclamation plans are designed to incorporate soil substrates, landscape and topographic diversity as mitigation measures. Vegetative resources will be affected for the short term; however, reclamation measures are incorporated in the permits for long term mitigation.

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6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	<p>[Y] No federally listed threatened or endangered species or its habitat is known to occur within the area of concern.</p> <p>A baseline vegetation inventory of the area was conducted by WESTECH Environmental Services, as reported in "Baseline Vegetation Inventory Tract III South, Absaloka Mine, Montana," Ken Scow, June 2004. One wetland feature that was identified in this report is a sub- irrigated/wet meadow of limited extent.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	<p>[Y] The area of concern was inventoried by GCM Services at the Class III level for cultural resources, as reported in "Class III Cultural Resource Survey of Westmoreland Resources, Inc. Absaloka Mine Tract III South", Meyer and Munson, February, 2004 and "Class III Cultural Resource Survey of Westmoreland Resources, Inc. Absaloka Mine Tract III South Addendum", Meyer, May 2004. The surveys located 9 historic or archeologic sites that would be disturbed. One prehistoric site, 24BH1123, was deemed eligible for the National Register based on its research potential, in consultation with the SHPO. This site had been tested geophysically in June, 2003, and was excavated according to an approved research plan in October, 2005 by Munson (GCM). Magnetic anomalies proved to be buried historic (ranch-related) metal debris, and no hearths or associated lithic tools were discovered. It was determined that 24BH1123 warrants no further work.</p> <p>There will be no further adverse effects upon known cultural resources from this permit amendment. Westmoreland has amended its life-of-mine Memorandum of Agreement for cultural resources in consultation with the SHPO to include the lands in Tract III South, and is fully compliant with the requirements of Section 106 of the National Historic Preservation Act for the proposed actions.</p>
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N]The project area is not on a prominent topographic feature. There is one residence with a view of the site. The residence is owned by the mining company, and is planned for removal.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	[N] The project is not expected to create demands on limited resources, and there is not another activity in the vicinity that will affect the project.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] There are no other activities nearby.

IMPACTS ON THE HUMAN POPULATION	
11. HUMAN HEALTH AND SAFETY: Will this project add to	[N] Heavy equipment, trucks, loaders, and blasting will create hazards;

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health and safety risks in the area?	however, the operator must comply with all MSHA and OSHA regulations. The operator currently utilizes proper precautions to enhance safety and will continue in the best interest of its employees. The proposed operation should not significantly affect human health.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] During mining a limited amount of agricultural land will be removed from use while the pit passes through the area. Following mining the lands will be returned to land uses existing pre-mine.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] The proposal is not expected to create a significant number of new jobs; however, if permitted the additional mining would continue jobs presently in place for a longer period of time.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] The proposed project should not eliminate any tax revenues. It is expected that the mine will sustain production at current levels and not change the state or local tax base resulting from mine production.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] Traffic is not expected to increase and demands on local and state services are projected to remain the same.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] The project area surface is owned by the operator with the mineral rights leased from the Crow Tribe of Indians. The permit is administered through a combined effort of the Montana Department of Environmental Quality and the Federal Office of Surface Mining (OSM). This group of entities jointly develop and manage environmental plans for this project.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] The proposed mine area is not located in or adjacent to any wilderness or recreational areas. Recreation potential within the site is limited to hunting by permission and occasional wildlife viewing.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] The project is not expected to significantly affect local populations. Neither population increase nor residential decrease will be incurred by approving the project.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] Historic cultural references are fully covered under Item 7, Historic and Archeological Sites. Known native or traditional lifestyle issues in the amendment area are covered by consultation with the Crow Tribe and OSM. While there are known to be species of plants with traditional Native American utilization, none of them are unique occurrences.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a	[N] The project is not expected to change anything significantly that has

IMPACTS ON THE HUMAN POPULATION	
shift in some unique quality of the area?	not been inventoried and mitigated in item 7.
21. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[Y]
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person(s) private property? If not, no further analysis is required.	[Y] The mine operator is the land owner and the Crow Tribe owns the coal. Proposed state government activities will place some restrictions on the owner's use of the property, but not sufficient enough to constitute a taking because the owner is not deprived of property or of all economic uses of that property.
23. PRIVATE PROPERTY IMPACTS: Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.	[Y] The Department has a level of discretion in its permitting decisions.
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

25. Alternatives Considered:

No Action: With this alternative the Absaloka mine operator would complete the currently approved mine plan and the mine would be closed in approximately 3 years. Operations for reclamation would continue with minimal man power until final bond could be released.

Approval: If approved the additional mining would extend the life of the Absaloka Mine. An estimated 24 million tons of coal would be added to the mine extending the life of mine approximately -- years.

Approval with modification: There are no other alternatives under consideration at this time.

26. Public Involvement: Availability of this Environmental Assessment was published in the Billings Gazette.

27. Other Governmental Agencies with Jurisdiction: Department of the Interior's Office of Surface Mining, Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality's Water Protection Bureau and Air Resources Management Bureau, Mine Safety and Health Administration.
28. Magnitude and Significance of Potential Impacts: Impacts of the entire operation were analyzed in the EA. There would be no significant impacts associated with this expansion.
29. Cumulative Effects: No other new activities have been identified in this area.

Recommendation for Further Environmental Analysis:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

EA Checklist Prepared By: Julian Calabrese
Soil Scientist/Environmental Specialist

Approved By: Neil Harrington

Signature

Date